



State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
Natural Resources Conservation Council

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation

Hazardous Materials Management Division
103 South Main Street / West Building
Waterbury, Vermont 05671-0404
802-244-8702

November 20, 1991

Sandy West
PO Box 2103
South Londonderry, VT 05155

RE: Petroleum contamination at the Londonderry Auto Service, Route 11, Londonderry
(Site #91-1061)

Dear Ms. West:

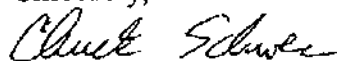
The Sites Management Section (SMS) has reviewed the site assessment report prepared by Clayton R. Morlock of Morlock Environmental, Inc. concerning petroleum contamination at the Londonderry Auto Service. Petroleum contamination has been present since June, 1991, and its source is still unknown. Additional investigative work, beyond the assessment completed by Morlock Environmental, is necessary at this site. This work is needed in order to clearly define the degree and limits of the contamination, as well as recommend the need for remedial cleanup of the site. With this in mind, the SMS requires you to hire a qualified consultant to perform the following tasks:

1. Undertake a free product recovery effort through hand bailing of the two contaminated monitoring wells onsite. Each well should be bailed weekly, with the date, water level, amount of free product in the well, and amount of free product bailed all recorded in a log book. This procedure should commence as soon as possible. Data should be submitted to the SMS on a monthly basis.
2. Install additional groundwater monitoring wells onsite. These will be used to clearly define the directions of the contaminant plume and the severity of groundwater contamination. It is believed that the majority of the contamination is on the western edge of the property; wells should be concentrated in the area of known contamination. It also appears that contamination has spread beyond the limits of the property; access to the neighboring land will need to be acquired in order to install monitoring wells downgradient of the plume direction.
3. Obtain groundwater samples from each monitoring well onsite, and analyze the samples according to EPA Methods 8240 and 418.1. The results of the tests should be sent to the SMS as soon as they are available.

4. Determine the sources of both the gasoline and oil contamination. The drywell should be taken out of service, and a soil sample from the drywell floor should be obtained and analyzed according to EPA Methods 8240 and 418.1. An investigation should be made into the drainage location of the floor drain on the southern end of the building. An additional soil sample in this drainage area may also be appropriate.
5. Perform a receptor assessment of the immediate area, detailing the potential risk of impact to all sensitive receptors, including but not limited to the West River and the building onsite. Also provide an analysis of the potential to impact adjacent private drinking supplies.
6. Develop additional hydrogeologic information detailing the soil and groundwater characteristics at this site. This will include a determination of soil type, groundwater flow direction, depth to groundwater, etc.
7. Determine the need to develop a remedial treatment plan for cleanup of the contamination at the site, both within and beyond the property boundaries. If treatment is necessary, the most practical options currently available should be evaluated, with emphasis on environmental soundness as well as economics.
8. Submit a summary report to the SMS detailing results and conclusions of the above work, as well as providing all analytical results. Recommendations for further investigations, monitoring, and/or treatment should also be presented at this time.

The SMS requests that the consultant submit a preliminary work plan responding to the work outlined above. This preliminary plan should be submitted within ten days of your receipt of this letter; if more time is needed on the consultant's part, he/she should call the SMS. This plan must be reviewed and approved by the SMS before any actual work begins at the site. If you have any questions, please call.

Sincerely,



Charles B. Schwer, Supervisor
Sites Management Section

cc: Butch Jelley
Londonderry Selectboard

ENVIRONMENTAL SITE ASSESSMENT

Site Investigation
of buildings and property at
The Londonderry Auto Service Center (Site 91-1061)
Rt. 11, Londonderry, Vermont

Prepared for:

**Sandy West
P.O. Box 2103
S. Londonderry, VT 05155**

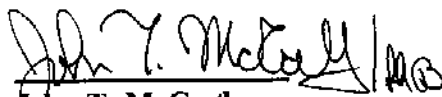
77-1061

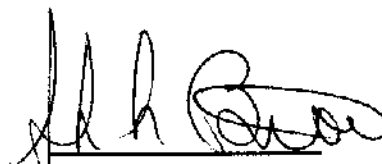
**Harlan West, Jr.
P.O. Box 401
Londonderry, VT 05418**

Submitted By

**STRATEGIC ANALYTICAL SYSTEMS, INC.
Hartley Hill, P.O. Box 207
Westminster Station, Vermont 05159**

Jan. 20, 1994


John T. McCarthy
Manager of Operations


Steven L. Brackett
**Marketing Manager/
Geologist**

ENVIRONMENTAL SITE ASSESSMENT

**on
the Londonderry Auto Service Center
Rt. 11
Londonderry, VT**

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Introduction

On Oct. 8, 1993 Strategic Analytical Systems, Inc. was retained by the owners of the Londonderry Auto Service (Site #91-1061) , Sandy and Harlan West, Jr. to conduct a Site Investigation as requested by the Sites Management Section of the Vermont State Department of Environmental Conservation. Londonderry Auto is located on Rt. 11 in the village of Londonderry, VT (see Appendix I - Location Map). This report summarizes the information collected during that Site Investigation and presents Strategic Analytical Systems, Inc.'s Conclusions and Recommendations based on that data.

Background Information

Londonderry Auto Service Center is presently a gasoline and service station and has been for decades. In September 1989 four monitoring wells were installed as a leak detection system for the six Underground Storage Tanks ("UST's") located onsite (see Appendix II for Site Plan). As was the case then, four UST's are utilized for storage of gasoline, one for diesel and one for fuel oil. In June of 1991 free product was discovered in two of these monitoring wells (gasoline was found in MW 2 and oil was found in MW 4). It was subsequently determined that the oil was actually lube oil. The free product was reported by Mr. Butch Jelley who is purchasing the property. At the request of the VT DEC a preliminary site investigation was conducted. Morlock Environmental performed a Soil Vapor Survey on July 31, 1991. This survey indicated a plume of contamination which appeared to start at the gasoline UST's and trended west southwest. In Nov. 1991, after reviewing the Morlock report, Mr. Chuck Schwer of the Vermont Department of Environmental Conservation, Sites Management Section, requested that specific additional investigation be performed at the site.

Scope of Work Performed

Since Oct. 8, 1993 Strategic Analytical Systems, Inc. has conducted the additional research, as specified in Mr. Schwer's letter of Nov. 1991 including:

- 1) recovery and analysis of free product,
- 2) installation of five additional monitoring wells (one of which was located on the Abbott property adjacent to the Londonderry Auto site downgradient of the contaminant plume direction),
- 3) collection and analysis of groundwater samples from all monitoring wells. Analysis was performed to determine the concentration of volatile organic compounds (EPA Method 8240)
- 4) investigation of the drainage location of the floor drain including collection and analysis of a soil sample from the floor of the drywell and analysis for concentration of volatile organic compounds and total petroleum hydrocarbons (EPA Method 8240 and 418.1, respectively)
- 5) analysis of potential receptors,
- 6) a geologic and hydrogeologic study of the site.

Initial Groundwater Sampling and Analysis -

On Oct. 27, 1993 personnel from Strategic Analytical Systems, Inc. collected groundwater samples from two of the existing monitoring wells (MW-1 and MW-3) at the Londonderry Auto site. Drinking water samples were also collected from the Abbott residence and from Londonderry Auto. As directed by the Vermont DEC, the groundwater samples were analyzed by EPA Method 8240, the sample from the Abbott residence was analyzed for gasoline contamination by EPA Method 8020 (the Abbott residence had previously been tested for volatile organic compounds by Method 524.1) and the sample from Londonderry Auto was analyzed for volatile organic compounds by EPA Method 524.1.

The groundwater from MW-1 contained concentrations of benzene and xylene in excess of Vermont groundwater enforcement standards. The groundwater from MW-3 did not contain detectable concentrations of any volatile organic compounds. Trace amounts of volatile organic compounds were detected in the drinking water at both the Abbott residence and at Londonderry Auto (the levels were below EPA Maximum Contaminant Limits).

The results of all these analyses (plus the initial Abbott test results) are listed in Appendix III.

Test Pitting/Excavation of Drywell -

On Nov. 17, 1993 personnel from Strategic Analytical Systems, Inc., along with Matt Germon of the Vermont Department of Environmental Conservation, Sites Management Section ("SMS"), monitored the installation and investigation of four Test Pits (trenches) at the site. Excavation was performed by personnel and equipment from Larry Brown Enterprises of Londonderry, VT.

Efforts to find and sample the drywell and to better define the nature and extent of the oil contamination around MW 4 were successful. Detailed notes on the work conducted and results of soil screening and soils descriptions derived from the Test Pits are presented in Appendix IV. The location of Test Pits are shown on the Site Plan in Appendix V.

The soil sample collected from the base of the drywell was analyzed by EPA Method 8240 and 418.1 to determine concentrations of Volatile Organic Compounds and Total Petroleum Hydrocarbons. An FID scan was conducted on a soil sample collected from the base of Test Pit 3. This type of laboratory analysis determines the type of petroleum product present (i.e gasoline, fuel oil, lube oil) and the concentration of that product in the sample. Both samples indicated extensive petroleum contamination. The FID scan indicated that the oil present in the area of MW 4 is primarily a lube oil with a small amount of gasoline. The results of these analyses are contained in Appendix VI.

Additional Monitoring Wells -

On Dec. 13, 1993 five additional monitoring wells were installed at the site. These wells were installed by T+K Drilling of Troy, NH under the supervision of a Strategic Analytical Systems, Inc. geologist. Drilling was performed with a hollow stem auger and soil sampling was performed with 24" split spoon samplers. The Strategic Analytical Systems, Inc. geologist conducted onsite field screening of all soil samples using a Biosystems OVM. Well logs including soil descriptions and results of the soil field screening are presented in Appendix VII.

In general, the information derived from the soil observations and field screening conducted during drilling confirmed the observations made earlier during the test pitting and earlier groundwater sampling.

Second Round of Groundwater Sampling -

On Dec. 17, 1993 personnel from Strategic Analytical Systems, Inc. conducted a second round of groundwater sampling at Londonderry Auto. This round included all of the monitoring wells, both old and new, which did not contain free product. Analysis by EPA Method 8240 was conducted on all samples. The results are listed in Appendix VIII.

Receptor Analysis -

Potential receptors consist of buildings onsite and on adjacent sites, soils and groundwater of this site and adjacent sites (i.e. the Abbott property) and surface waters (i.e. the West River).

Clearly, as the results of soil screening and laboratory analysis show, the soil and water of the Londonderry Auto site both are contaminated with either gasoline or oil or both. Soil screening conducted during test pitting indicates that the soil has been contaminated from depths of approximately 18 inches to as much as 12 feet.

An isopleth map showing the areal extent and degree of groundwater contamination is presented in Appendix X. There is a moderate to high risk that the groundwater

contamination at Londonderry Auto will impact adjacent private drinking water supplies. (All of the drinking water in the village of Londonderry is derived from private water wells and at least 12 of these are located within 1 mile down stream from the site.) The closest of the wells is located on the adjacent Abbott property and, as stated above, the drinking water supply at the Abbott residence contains MTBE (which is a component of unleaded gasoline).

The West River is immediately adjacent to the site and, in addition to being a receptor, it is also the most effective path of contaminant transport to down stream drinking water supplies. Results of soils investigation and field screening indicate that seepage into the West River may already be occurring. Soil samples taken from hand angled boreholes on the river bank immediately adjacent to MW 4 clearly show evidence of the same type of contamination present in that well.

Four other potential receptors exist which, at present, do not appear to have been impacted by the petroleum contamination at Londonderry Auto. These are the soil/groundwater at adjacent sites, the building on the Londonderry Auto site and the buildings on Henry Abbott's site. All of these receptors were inspected with either an OVM or by laboratory analysis; all results were negative. Of the two buildings considered to be potential receptors, the Abbott residence is less likely to be impacted since it is a significant distance from the area of floating free product.

Site Geology and Hydrogeology -

The Londonderry Auto site is located in the upper part of the West River Valley immediately on the banks of the river. Depth to bedrock, based on drinking water wells drilled on this site and adjacent sites, is 55 - 60 feet. Soils vary in type from poorly sorted, immature gravels to moderately well sorted, clean sands. In one monitoring well a 24" layer of clayey silt was observed. This layer, however, appeared to be lenticular.

In the immediate area of the site there did not appear to be either structural or stratigraphic impediments to flow in the subsurface (i.e. bedrock knobs, permeability barriers). Depth to groundwater is between 7 and 8 feet. The groundwater table in this area is quite flat but it is clear that groundwater flow is west-southwest subparallel to the West River. It is estimated that the gasoline contamination is migrating at a rate of approximately 2.5 feet per month. Since the extent of the oil contamination under the West River cannot be determined a migration rate for the oil contamination can only be approximated. It may be assumed that the migration rate of the oil is less than for the gasoline due to the higher viscosity of the oil.

Source of Contamination -

The data collected during this study strongly indicate that the source of the gasoline which is contaminating the soil and water at the site is the existing gasoline UST's. This conclusion is supported by the following observations: 1) Both soil and groundwater contamination increase dramatically in vicinity of the gasoline UST's, 2) when the gasoline UST's are low or empty the free gasoline in MW 2 (which is immediately adjacent to the tanks) disappears and 3) the gasoline UST's are the only practical option as a source for contamination of the magnitude present (the volume of gasoline present in the soil and groundwater is conservatively calculated to be 6701 gallons).

During the investigations conducted under this contract no evidence of an existing source of the lube oil contamination was discovered. None of the existing UST's have been used to store lube oil so they cannot be the source. A floor drain may have been the source. However, the few small pieces of pipe recovered during test pitting gave negative test results when field screened for the presence of volatile organics. A magnetometer survey of the area showed no UST's besides those already discussed. Some anecdotal evidence indicates that there may have been above ground waste oil tanks located on this part of the site. Unfortunately, the information is inconsistent from source to source and, at times, is actually contradictory. What is clear is that, whatever the source of the lube oil was, it is no longer present.

Conclusions -

Based on the data collected in this Site Investigation Strategic Analytical Systems, Inc. concludes the following:

- Releases of both gasoline and lube oil have resulted in contamination of both soil and groundwater at the site.
- Concentrations of Benzene, Toluene, Ethylbenzene and Total Xylene exceed State and Federal groundwater standards at points on the site.
- Contamination is spreading through vapor phase migration in the soil, groundwater migration and probably through migration in surface water.
- Given the extensive gasoline contamination, the migration of the contamination and the moderate to high risk of contaminating down stream drinking water supplies development of a Corrective Action Plan for the Londonderry Auto site is necessary and should be given high priority.

Recommendations

Strategic Analytical Systems, Inc. recommends the following:

- the existing gasoline UST's should be removed as soon as possible; new UST's should be installed for the future storage of gasoline and fuel oil storage. These new tanks must meet or exceed Vermont State regulations.
- a soil venting feasibility study should be conducted and, if successful, such a system should be designed and installed to remediate gasoline contaminated soil.

- a system for remediating gasoline contaminated groundwater should be designed. To the extent possible this system should work in conjunction with the soil remediation system.

- free product recovery of lube oil should continue;

- once all free lube oil has been removed oil contaminated soil should be excavated. As much contaminated soil as possible should be removed without destabilizing the bank of the West River. The decision whether to treat the excavated soil onsite or to dispose of it offsite should be based on a comparative analysis of the relative costs and benefits of the options.

Limitations

The findings set forth in this report are strictly limited in time and scope to the date of evaluation. The conclusions presented are based solely on the services described therein, and not on the scientific tasks or procedures beyond the scope of agreed upon services or the time and budgeting restraints imposed by the client.

Service Constraints

Much of the information provided in this report is based upon personal interviews and research of all available documents, records, and maps held by appropriate government and private agencies. This is subject to the limitations of historical documentation, availability, and accuracy of pertinent records and the personal recollection of those persons contacted.

The initial investigation took into account the natural and manmade features of the site, including any unusual or suspect phenomenon. These factors combined with the sites geology, hydrology, topography, and past and present land uses, served as the basis for the conclusions rendered.

The presence of radioactive materials or biological hazards were not investigated unless specifically noted otherwise.

Sources of Information

Hazardous Waste Generators List

Hazardous Waste File

General Correspondence

Londonderry Town File

Londonderry Public Works Dept.

County Registry of Deeds

Standard Handbook of Environmental Engineering

Text: Water Analysis

Soil Survey of Cheshire County New Hampshire

40 CFR Part 261, " Identification and Listing of Hazardous Waste

WP51\document\las.01r

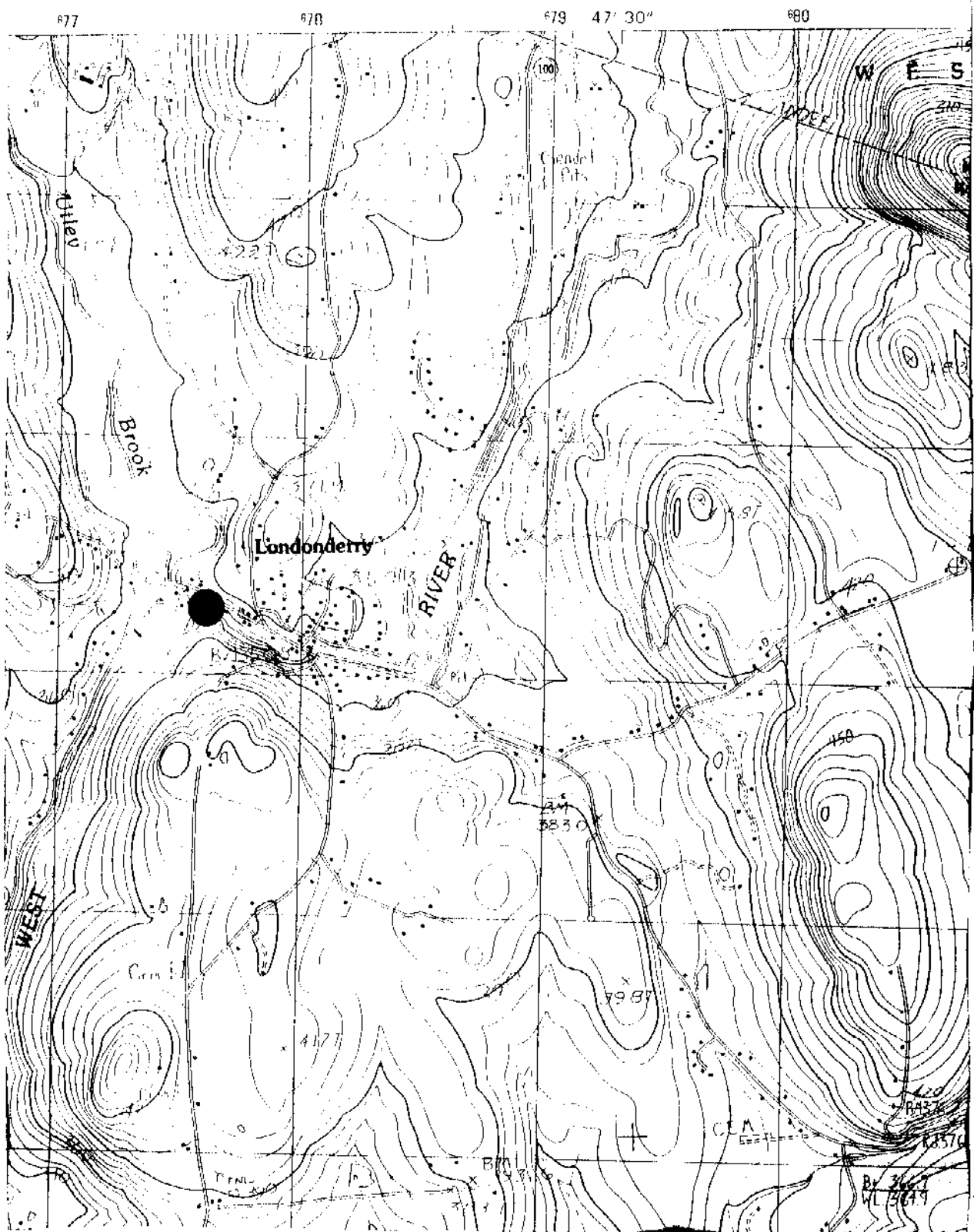
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STRATEGIC ANALYTICAL SYSTEMS, INC.

APPENDIX I

LONDONDERRY AUTO SERVICE, INC.

TOPOGRAPHIC MAP

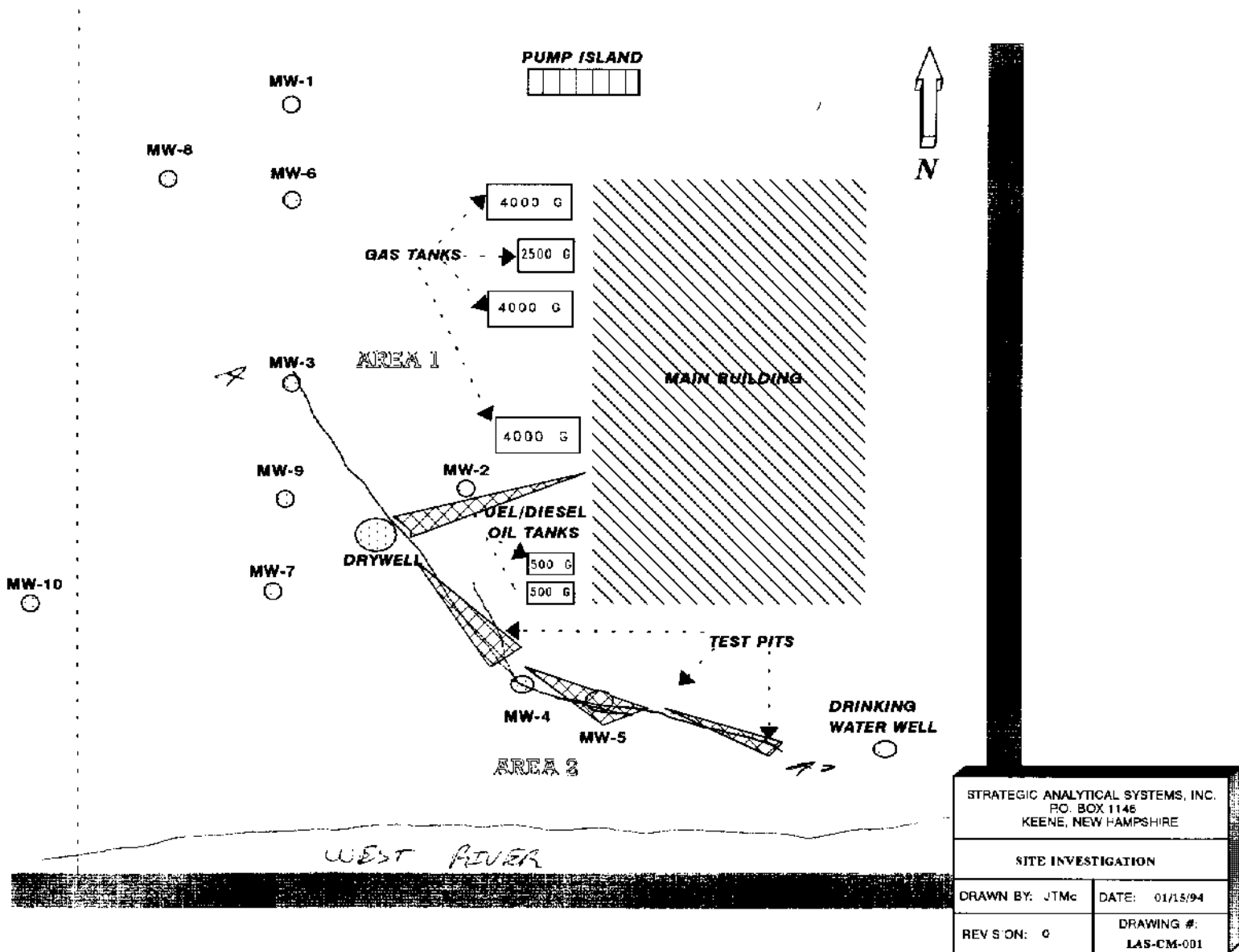


APPENDIX II

LONDONDERRY AUTO SERVICE, INC.

ROUTE 11

LONDONDERRY, VERMONT



APPENDIX III



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr. Report # 7187
Address: Box 2103 Date Received: 11/01/93
City: So. Londonderry, VT 05155 Date Collected: 10/29/93
Sample ID: LAS-CM-001/LASCM001.1 Test Date: 11/03/93
Matrix: Drinking Water Collected By: STB
Sample Location: Henry Abbott Residence
Rte 11/Main St/Londonderry, VT

LAS-CM-001.1

PARAMETER	RESULT	MDL	UOM	METHOD #
BENZENE	<1	<1	UG/L	EPA# 8020
TOLUENE	<1	<1	UG/L	EPA# 8020
ETHYLBENZENE	<1	<1	UG/L	EPA# 8020
TOTAL XYLENES	<1	<1	UG/L	EPA# 8020
CHLOROBENZENE	<1	<1	UG/L	EPA# 8020
STYRENE	<1	<1	UG/L	EPA# 8020

Analyst: LB

Approved by: J.T. MCCARTHY

-PLEASE NOTE-

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* = Exceeds EPA Proposed MCL Limits
MDL = Minimum Detection Limit
MCL LIMIT = Proposed EPA Maximum Contaminant Level
LOD = Limit of Detection
ND = Level Present is below detection limit
NT = Not Tested

LAB ID#: 101293-B

LASCM001.1



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr Report # 7187
Address: Box 2103 Date Received: 11/01/93
City: So. Londonderry, VT 05155 Date Collected: 10/29/93
Sample ID: LAS-CM-001/LASCM001.2 Test Date: 11/03/93
Matrix: Ground Water (Well #1) Dilution Factor: 10
Sample Location: Londonderry Auto Collected By: STB
Rte 11/Main St/Londonderry, VT

LAS-CM-001.2

PARAMETER	RESULT	MDL	UOM	METHOD #
CHLOROMETHANE	<100	<100	UG/L	EPA# 624
BROMOMETHANE	<100	<100	UG/L	EPA# 624
VINYL CHLORIDE	<100	<100	UG/L	EPA# 624
CHLOROETHANE	<100	<100	UG/L	EPA# 624
METHYLENE CHLORIDE	<20	<20	UG/L	EPA# 624
CARBON DISULFIDE	<20	<20	UG/L	EPA# 624
1,1-DICHLOROETHENE	<20	<20	UG/L	EPA# 624
1,1-DICHLOROETHANE	<20	<20	UG/L	EPA# 624
TRANS-1,2-DICHLOROETHENE	<20	<20	UG/L	EPA# 624
CIS-1,2-DICHLOROETHENE	<20	<20	UG/L	EPA# 624
CHLOROFORM	<20	<20	UG/L	EPA# 624
1,2-DICHLOROETHANE	<20	<20	UG/L	EPA# 624
1,1,1-TRICHLOROETHANE	<20	<20	UG/L	EPA# 624
CARBON TETRACHLORIDE	<20	<20	UG/L	EPA# 624
BROMODICHLOROMETHANE	<20	<20	UG/L	EPA# 624
1,2-DICHLOROPROPANE	<20	<20	UG/L	EPA# 624
TRANS-1,3-DICHLOROPROPENE	<20	<20	UG/L	EPA# 624
TRICHLOROETHENE	<20	<20	UG/L	EPA# 624



Strategic Analytical Systems, Inc.

ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"



PARAMETER	RESULT	MDL	UOM	METHOD #
DIBROMOCHLOROMETHANE	<20	<20	UG/L	EPA# 624
1,1,2-TRICHLOROETHANE	<20	<20	UG/L	EPA# 624
CIS-1,3-DICHLOROPROPENE	<20	<20	UG/L	EPA# 624
2-CHLOROETHYLVINYLEETHER	<20	<20	UG/L	EPA# 624
BROMOFORM	<20	<20	UG/L	EPA# 624
TETRACHLOROETHENE	<20	<20	UG/L	EPA# 624
1,1,2,2-TETRACHLOROETHANE	<20	<20	UG/L	EPA# 624
ACETONE	<500	<500	UG/L	EPA# 624
2-BUTANONE (MEK)	<100	<100	UG/L	EPA# 624
VINYL ACETATE	<100	<100	UG/L	EPA# 624
4-METHYL-2-PENTANONE (MIBK)	<100	<100	UG/L	EPA# 624
2-HEXANONE	<100	<100	UG/L	EPA# 624
BENZENE	540 *	<10	UG/L	EPA# 624
TOLUENE	260	<10	UG/L	EPA# 624
ETHYLBENZENE	140	<10	UG/L	EPA# 624
TOTAL XYLENES	940	<10	UG/L	EPA# 624
CHLOROBENZENE	<10	<10	UG/L	EPA# 624
STYRENE	<10	<10	UG/L	EPA# 624

LASCM001.2

Analyst: LB

Approved by: J.T. MCCARTHY

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LAB ID#: 101293-B



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LABORATORY ANALYSIS REPORT

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Address: Box 2103 Date Received: 11/01/93
City: So. Londonderry, VT 05155 Date Collected: 10/29/93
Sample ID: LAS-CM-001/LASCM001.3 Test Date: 11/03/93
Matrix: Ground Water (Well #3) Dilution Factor: 1
Sample Location: Londonderry Auto Collected By: STB
Rte 11/Main St/Londonderry, VT

LAS-CM-001.3

PARAMETER	RESULT	MDL	UOM	METHOD #
CHLOROMETHANE	<10	<10	UG/L	EPA# 624
BROMOMETHANE	<10	<10	UG/L	EPA# 624
VINYL CHLORIDE	<10	<10	UG/L	EPA# 624
CHLOROETHANE	<10	<10	UG/L	EPA# 624
METHYLENE CHLORIDE	<2	<2	UG/L	EPA# 624
CARBON DISULFIDE	<2	<2	UG/L	EPA# 624
1,1-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
1,1-DICHLOROETHANE	<2	<2	UG/L	EPA# 624
TRANS-1,2-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
CIS-1,2-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
CHLOROFORM	<2	<2	UG/L	EPA# 624
1,2-DICHLOROETHANE	<2	<2	UG/L	EPA# 624
1,1,1-TRICHLOROETHANE	<2	<2	UG/L	EPA# 624
CARBON TETRACHLORIDE	<2	<2	UG/L	EPA# 624
BROMODICHLOROMETHANE	<2	<2	UG/L	EPA# 624
1,2-DICHLOROPROPANE	<2	<2	UG/L	EPA# 624
TRANS-1,3-DICHLOROPROPENE	<2	<2	UG/L	EPA# 624
TRICHLOROETHENE	<2	<2	UG/L	EPA# 624



Strategic Analytical Systems, Inc.

ENVIRONMENTAL CONSULTING AND ANALYSIS

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BROMOFORM	<2	<2	UG/L	EPA# 624
TETRACHLOROETHENE	<2	<2	UG/L	EPA# 624
1,1,2,2-TETRACHLOROETHANE	<2	<2	UG/L	EPA# 624
ACETONE	<50	<50	UG/L	EPA# 624
2-BUTANONE (MEK)	<10	<10	UG/L	EPA# 624
VINYL ACETATE	<10	<10	UG/L	EPA# 624
4-METHYL-2-PENTANONE (MIBK)	<10	<10	UG/L	EPA# 624
2-HEXANONE	<10	<10	UG/L	EPA# 624
BENZENE	<1	<1	UG/L	EPA# 624
TOLUENE	<1	<1	UG/L	EPA# 624
ETHYLBENZENE	<1	<1	UG/L	EPA# 624
TOTAL XYLENES	<1	<1	UG/L	EPA# 624
CHLOROBENZENE	<1	<1	UG/L	EPA# 624
STYRENE	<1	<1	UG/L	EPA# 624

Analyst: LB

Approved by: J.T. MCCARTHY

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LASC00013

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LOD = Limit of Detection

ND = Level Present is below detection limit

NT = Not Tested

LAB ID#: 101293.B



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr Report # 7187
Address: Box 2103 Date Received: 11/01/93
City: So. Londonderry, VT 05155 Date Collected: 10/29/93
Sample ID: LAS-CM-001/LASCM001.4 Test Date: 11/04/93
Matrix: Drinking Water Collected By: STB
Sample Location: Londonderry Auto
Rte 11/Main St/Londonderry, VT

LAS-CM-001.4

PARAMETER	RESULT	MDL	UOM	METHOD #
BENZENE	<0.5	<0.5	UG/L	EPA# 524
BROMOBENZENE	<0.5	<0.5	UG/L	EPA# 524
BROMOCHLOROMETHANE	<0.5	<0.5	UG/L	EPA# 524
BROMODICHLOROMETHANE	<0.5	<0.5	UG/L	EPA# 524
BROMOFORM	<0.5	<0.5	UG/L	EPA# 524
BROMOMETHANE	<2	<2	UG/L	EPA# 524
n-BUTYLBENZENE	<0.5	<0.5	UG/L	EPA# 524
sec-BUTYLBENZENE	<0.5	<0.5	UG/L	EPA# 524
tert-BUTYLBENZENE	<0.5	<0.5	UG/L	EPA# 524
CARBON-TETRACHLORIDE	<0.5	<0.5	UG/L	EPA# 524
CHLOROBENZENE	<0.5	<0.5	UG/L	EPA# 524
CHLOROETHANE	<2	<2	UG/L	EPA# 524
CHLOROFORM	<0.5	<0.5	UG/L	EPA# 524
CHLOROMETHANE	<2	<2	UG/L	EPA# 524
2-CHLOROTOLUENE	<0.5	<0.5	UG/L	EPA# 524
4-CHLOROTOLUENE	<0.5	<0.5	UG/L	EPA# 524
DIBROMOCHLOROMETHANE	<0.5	<0.5	UG/L	EPA# 524
1,2-DIBROMO-3-CHLOROPROPANE	<0.5	<0.5	UG/L	EPA# 524



Strategic Analytical Systems, Inc.

ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"



PARAMETER	RESULT	MDL	UOM	METHOD #
1,2-DIBROMETHANE	<0.5	<0.5	UG/L	EPA# 524
DIBROMOMETHANE	<0.5	<0.5	UG/L	EPA# 524
1,2-DICHLOROBENZENE	<0.5	<0.5	UG/L	EPA# 524
1,3-DICHLOROBENZENE	<0.5	<0.5	UG/L	EPA# 524
1,4-DICHLOROBENZENE	<0.5	<0.5	UG/L	EPA# 524
DICHLORODIFLUOROMETHANE	<2	<2	UG/L	EPA# 524
1,1-DICHLOROETHANE	<0.5	<0.5	UG/L	EPA# 524
1,2-DICHLOROETHANE	<0.5	<0.5	UG/L	EPA# 524
1,1-DICHLOROETHENE	<0.5	<0.5	UG/L	EPA# 524
cis-1,2-DICHLOROETHENE	<0.5	<0.5	UG/L	EPA# 524
trans-1,2-DICHLOROETHENE	<0.5	<0.5	UG/L	EPA# 524
1,2-DICHLOROPROPANE	<0.5	<0.5	UG/L	EPA# 524
2,2-DICHLOROPROPANE	<0.5	<0.5	UG/L	EPA# 524
1,1-DICHLOROPROPENE	<0.5	<0.5	UG/L	EPA# 524
ETHYLBENZENE	<0.5	<0.5	UG/L	EPA# 524
HEXACHLOROBUTADIENE	<0.5	<0.5	UG/L	EPA# 524
ISOPROPYLBENZENE	<0.5	<0.5	UG/L	EPA# 524
p-ISOPROPYLTOLUENE	<0.5	<0.5	UG/L	EPA# 524
METHYLENE CHLORIDE	<0.5	<0.5	UG/L	EPA# 524
NAPHTHALENE	<0.5	<0.5	UG/L	EPA# 524
n-PROPYLBENZENE	<0.5	<0.5	UG/L	EPA# 524
STYRENE	<0.5	<0.5	UG/L	EPA# 524
1,1,1,2-TETRACHLOROETHANE	<0.5	<0.5	UG/L	EPA# 524
1,1,2,2-TETRACHLOROETHANE	<0.5	<0.5	UG/L	EPA# 524



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"

PARAMETER	RESULT	MDL	UOM	METHOD #
TETRACHLOROETHENE	<0.5	<0.5	UG/L	EPA# 524
TOLUENE	2.8	<0.5	UG/L	EPA# 524
1,2,3-TRICHLOROBENZENE	<0.5	<0.5	UG/L	EPA# 524
1,2,4-TRICHLOROBENZENE	<0.5	<0.5	UG/L	EPA# 524
1,1,1-TRICHLOROETHANE	<0.5	<0.5	UG/L	EPA# 524
1,1,2-TRICHLOROETHANE	<0.5	<0.5	UG/L	EPA# 524
TRICHLOROETHENE	<0.5	<0.5	UG/L	EPA# 524
TRICHLOROFLUOROMETHANE	<2	<2	UG/L	EPA# 524
1,2,3-TRICHLOROPROPANE	<0.5	<0.5	UG/L	EPA# 524
1,2,4-TRIMETHYLBENZENE	<0.5	<0.5	UG/L	EPA# 524
1,3,5-TRIMETHYLBENZENE	<0.5	<0.5	UG/L	EPA# 524
VINYL CHLORIDE	<2	<2	UG/L	EPA# 524
o-XYLENE	<0.5	<0.5	UG/L	EPA# 524
m,p-XYLENE	<0.5	<0.5	UG/L	EPA# 524

Analyst: NZ

Approved by: J.T. MCCARTHY

-PLEASE NOTE-

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MDL = Minimum Detection Limit

MCL LIMIT = Proposed EPA Maximum Contaminant Level

LOD = Limit of Detection

ND = Level Present is below detection limit

NT = Not Tested

LAB ID#: 101293-B

LASCM001.4

APPENDIX IV

Londonderry Auto - Field Notes on Test Pits and Excavation of Drywell

Arrived on site at 7:25 A.M., Wednesday Morning Nov. 17, 1993. Larry Brown's 290 D John Deere excavator was already onsite

	<u>Water Level</u>
MW-2	7.8' Strong Gasoline Odor
MW-4	7.95' to top of Free Product
MW-3	7.25'
MW-1	7.95'

Depths to groundwater are measured from groundlevel.

8:00 A.M. Began digging, went 2 feet in depth and found 4" PVC pipe from floor drain. Soil all looked clean, no odor. Pipe exited building at approx. 30 degree angle.

8:20 A.M. At 6' from building 4"PVC turned approx. 15 degrees W-SW. After the turn the pipe continued another 6' in good clean soil (no stain/no odor). At this point we began to encounter a dark (stained?) soil layer at a depth of 18 to 24 inches. As soon as we broke into this layer there was a very strong petroleum odor. The dark layer persisted for another 24 feet.

8:26 A.M. The top layer consisted of 6" of tan gravel fill. Below that was 14" of a dark soil which was a mix of clay, blacktop and had a strong petroleum odor. Below that was a gray anoxic soil which looked similar to a basal till (dense poorly sorted with rounded 3 to 4' cobbles).

8:31 A.M. Found the dry well 20' from the river and 41 ' from the bend in the pipe which was 6' from the building. Drywell was 47' SW from the center of the middle bay of building.

8:35 Weather conditions were grey, overcast, 27 degrees (it rained later in the day)

8:58 A.M. Matt Germon arrived onsite; we had taken a soil sample from the base of the drywell at 8:50 A.M.. The sample was collected from outside the drywell by putting a shovel through a break in the masonry wall of the drywell. The sample appeared to consist of sediment which had collected in the concrete catch basin. There was no staining or odor. The drywell was 4' high (floor of drywell was 6.75' below groundlevel) and 4' in diameter with masonry walls and a cement cover. PID reading in the drywell was 10 ppm. Next a trench was dug from MW-4 toward the drywell.

9:03 A.M. Began digging trench. Soil description: 3' layer chocolate brown and below that was a light tan sandy soil(fill).

9:14 A.M. Test #1 - PID readings on soil near bay door (beginning of excavation) 2-2.5 ppm. Test #2 - grey gravelly soil (below brown) 5' from door 20-30 ppm.

9:27 A.M. Found what we originally thought was a drywell because it was a layer of 4 to 6' diameter cobbles in a layer 2' thick (after more digging it was clear than this was just fill). Matches with the top of the oil in MW-4.

9:54 A.M. Test #4 - In the flowline trench, bottom of the hole was 200 ppm ; Test #5 - 190 ppm on a 0-200 ppm scale.

9:58 A.M. Test #6 - (6' from the drywell) bottom of the hole, 2.5 to 3 ' deep, 45 ppm. A sample from the side at 18" was 7 ppm.

10:01 A.M. Decided to backfill and to extend excavation upriver (ESE) from MW-4. In the trench which ran from MW-4 downriver (WNW) we did not encounter groundwater but screened soil in the trench and found the limit of contamination 3' from MW-4.

10:39 A.M. Top layer: brown, well sorted sand and another layer of dark stained soil with no smell and then another layer of sand. Below that was another layer of cobbles.

10:41 A.M. Test Pit 3 was begun 14' east of MW-4. At 6' deep and 6' from MW-4 we hit a dark stained soil layer with a strong smell.

10:58 A.M. We found large slabs of concrete (3-4' in diameter and 4' thick) at 6.5' deep in the trench. Bottom of the slabs were black; appeared to be biological mat. PID readings were 10-15 ppm. Also collected a soil sample with the bucket at approx. 8'. Strong staining and smell. PID readings of 190 ppm. This sample was sent to the lab for an FID scan.

11:45 A.M. Test Pit 3 was 9' 11" deep at the eastern end (which is 14' from the MW-4). Encountered groundwater at 9'1". Trench filled with water and black oil. We decided to install a MW to be used to recover free product. This is MW 5.

1:10 P.M. We have installed MW 5 using 4" PVC hand slotted from the bottom up 6'. Slots were cut at diagonals on both sides of pie up to 3' and on one side up to 6'. Bottom of casing went 18 to 24' into the groundwater and hole was backfilled using the native, well sorted, clean sand encountered during the digging. The rest of the hole was filled with native soil and the pipe was covered and left extending approx. 20" above groundlevel. The dirty soil which was recovered during digging was placed on a bench in the excavation. It was buried about 4' from bottom.

1:23 P.M. Began digging another trench 10' upriver (ESE) from the MW-5 and 24' from MW-4.

1:30 P.M. We found a black steel pipe approx. 1.5' in diameter. Tried to follow it for a while but it appeared to just be a piece of trash so we pushed it to the side and continued.

2:20 P.M. Dug Test Pit 4. At 9' 1" we encountered groundwater. We allowed water to flow into the well. Although there was a strong odor there was not initially any free product. A groundwater sample was collected and had a slight but distinct sheen and pin head sized drops of black oil were present on the jar surface.

2:30 P.M. Finished filling in excavation.

3:00 P.M. Released rig. Site restored.

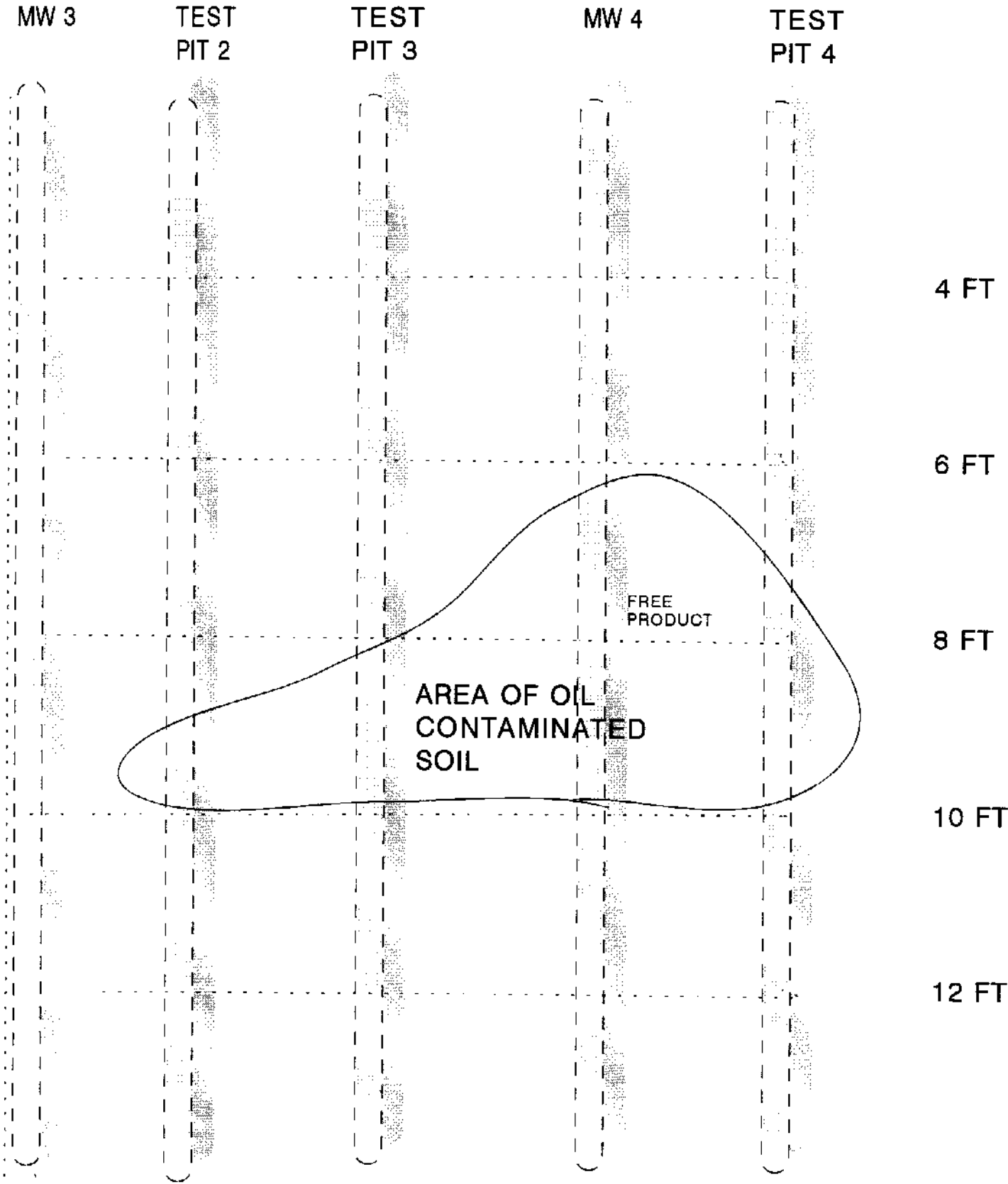
3:10 P.M. Left site.

3:50 P.M. Arrived back at the office.

Two soil samples were sent by Federal Express to Eastern Analytical. One was from the floor of the drywell was analyzed for volatile organic compounds and total petroleum hydrocarbons by EPA Method 8240 and 418.1, respectively. The second was from Test Pit 3 was analyzed by FID Scan to determine what type of hydrocarbon product is in the soil.

APPENDIX V

LONDONDERRY AUTO CROSS SECTION A-A'
NW TO SE



APPENDIX VI



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr Report # 7336
Address: Box 2103 Date Received: 11/18/93
City: So. Londonderry, VT 05155 Date Collected: 11/17/93
Sample ID: LAS-CM-002/LASCM002.1-A Test Date: 11/18/93
Matrix: Soil (Drywell Floor) Dilution Factor: 20
Sample Location: Londonderry Auto Collected By: STB
Rte 11/Main St/Londonderry, VT

LAS-CM-002.1 - A

PARAMETER	RESULT	MDL	UOM	METHOD #
CHLOROMETHANE	<2000	<2000	µg/kg	EPA# 8240
BROMOMETHANE	<2000	<2000	µg/kg	EPA# 8240
VINYL CHLORIDE	<2000	<2000	µg/kg	EPA# 8240
CHLOROETHANE	<2000	<2000	µg/kg	EPA# 8240
METHYLENE CHLORIDE	<200	<200	µg/kg	EPA# 8240
CARBON DISULFIDE	<200	<200	µg/kg	EPA# 8240
1,1-DICHLOROETHENE	<200	<200	µg/kg	EPA# 8240
1,1-DICHLOROETHANE	<200	<200	µg/kg	EPA# 8240
TRANS-1,2-DICHLOROETHENE	<200	<200	µg/kg	EPA# 8240
CIS-1,2-DICHLOROETHENE	<200	<200	µg/kg	EPA# 8240
CHLOROFORM	<200	<200	µg/kg	EPA# 8240
1,2-DICHLOROETHANE	<200	<200	µg/kg	EPA# 8240
1,1,1-TRICHLOROETHANE	<200	<200	µg/kg	EPA# 8240
CARBON TETRACHLORIDE	<200	<200	µg/kg	EPA# 8240
BROMODICHLOROMETHANE	<200	<200	µg/kg	EPA# 8240
1,2-DICHLOROPROPANE	<200	<200	µg/kg	EPA# 8240
TRANS-1,3-DICHLOROPROPENE	<200	<200	µg/kg	EPA# 8240
TRICHLOROETHENE	<200	<200	µg/kg	EPA# 8240



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"

PARAMETER	RESULT	MDL	UOM	METHOD #
DIBROMOCHLOROMETHANE	<200	<200	µg/kg	EPA# 8240
1,1,2-TRICHLOROETHANE	<200	<200	µg/kg	EPA# 8240
CIS-1,3-DICHLOROPROPENE	<200	<200	µg/kg	EPA# 8240
2-CHLOROETHYLVINYLETHER	<200	<200	µg/kg	EPA# 8240
BROMOFORM	<200	<200	µg/kg	EPA# 8240
TETRACHLOROETHENE	<200	<200	µg/kg	EPA# 8240
1,1,2,2-TETRACHLOROETHANE	<200	<200	µg/kg	EPA# 8240
ACETONE	<10000	<10000	µg/kg	EPA# 8240
2-BUTANONE (MEK)	<2000	<2000	µg/kg	EPA# 8240
VINYL ACETATE	<2000	<2000	µg/kg	EPA# 8240
4-METHYL-2-PENTANONE (MIBK)	<2000	<2000	µg/kg	EPA# 8240
2-HEXANONE	<2000	<2000	µg/kg	EPA# 8240
BENZENE	4,400 *	<200	µg/kg	EPA# 8240
TOLUENE	24,000 *	<200	µg/kg	EPA# 8240
ETHYLBENZENE	6,200 *	<200	µg/kg	EPA# 8240
TOTAL XYLENES	180,000 *	<200	µg/kg	EPA# 8240
CHLOROBENZENE	<200	<200	µg/kg	EPA# 8240
STYRENE	<200	<200	µg/kg	EPA# 8240

LASCM002.1 - A



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"

LAS-CM-002.1 - A (Continued)

Analyst: LB

Approved by: J.T. MCCARTHY

-PLEASE NOTE-

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MCL LIMIT = Proposed EPA Maximum Contaminant Level

LOD = Limit of Detection

ND = Level Present is below detection limit

NT = Not Tested

LAB ID#: 101293-B

LASCM002.1 - A



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr Report # 7336
Address: Box 2103 Date Received: 11/18/93
City: So. Londonderry, VT 05155 Date Collected: 11/17/93
Sample ID: LAS-CM-002/LASCM002.1-B Test Date: 11/23/93
Matrix: Soil (Drywell Floor) Collected By: STB
Sample Location: Londonderry Auto
Rte 11/Main St/Londonderry, VT

LAS-CM-002.1 - B

PARAMETER	RESULT	MDL	UOM	METHOD #
TOTAL PETROLEUM HYDROCARBONS	48,000 *	<50	mg/kg	EPA# 418.1

Analyst: JDS

Approved by: J.T. MCCARTHY

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MDL = Minimum Detection Limit

MCL LIMIT = Proposed EPA Maximum Contaminant Level

LOD = Limit of Detection

ND = Level Present is below detection limit

NT = Not Tested

LAB ID#: 101293-B

LASCM002.1 - B



Strategic Analytical Systems, Inc.

ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"



LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr Report # 7336
Address: Box 2103 Date Received: 11/18/93
City: So. Londonderry, VT 05155 Date Collected: 11/17/93
Sample ID: LAS-CM-002/LASCM002.2 Test Date: 11/23/93
Matrix: Soil (Adjacent to MW-5) Collected By: STB
Sample Location: Londonderry Auto
Rte 11/Main St/Londonderry, VT

LAS-CM-002.2 (REVISED)

PARAMETER	CARBON RANGE	RESULT	MDL	UOM	METHOD #
WEATHERED GASOLINE	C8-C14	1,500 *	20	mg/kg	EPA# 8100
LUBRICATING OIL	C20-C36	60,000 *	20	mg/kg	EPA# 8100 ***

Analyst: BDS

Approved by: J.T. MCCARTHY

-PLEASE NOTE-

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MCL LIMIT = Proposed EPA Maximum Contaminant Level

LOD = Limit of Detection

ND = Level Present is below detection limit

NT = Not Tested

LAB ID#: 101293-B

LASCM002.2

*** CORRECTED METHOD FOR LUBRICATING OIL IS # 8100

APPENDIX VII

STRATEGIC ANALYTICAL SYSTEMS, INC.

BORING LOG

PROJECT:	Londonderry Auto	Hole Diameter:	6"
LOCATION:	Londonderry, VT	Screen Diameter:	2"
DATE DRILLED:	Dec. 13, 1993	Casing Diameter:	2"
WELL NUMBER:	6	Slot Size:	.020"
Drilling Company:	T+K Drig	Total Depth:	13'
Driller:	Tamilla	Screen Legth:	10'
Drilling Method:	Hollow Anger	Casing Length:	3'
Logged By:	Brackett	Type:	PVC

DEPTH (feet)	Well Materials	Well Construction	Blows/6" OVM Readings	Litholgy Notes (texture, color, size)	
0	road box				0
	lockcap				
	native				
	bentonite				
	seal				
2.5					2.5
			2,9,3,23		
5			107 ppm	fine grained, silty brown	5
				sand w/ small pebbles	
7.5			35,36 (only 12" sample)		7.5
			722 ppm	well sorted, fine brown	
	coarse			sand	
	sorted				
10	sand		6,7,15,13		10
			135 ppm	coarse grained, medium	
				sorted brown sand	
12.5					12.5
	total				
	depth				
15	= 13'				15

STRATEGIC ANALYTICAL SYSTEMS, INC.

BORING LOG

PROJECT:	Londonerry Auto	Hole Diameter:	6"
LOCATION:	Londonerry, VT	Screen Diameter:	2"
DATE DRILLED:	Dec. 13, 1993	Casing Diameter:	2"
WELL NUMBER:	7	Slot Size:	.020"
Drilling Company:	T+K Drtg	Total Depth:	13'
Driller:	Tomilla	Screen Legth:	10'
Drilling Method:	Hollow Anger	Casing Length:	3'
Logged By:	Brackett	Type:	PVC

DEPTH (feet)	Well Materials	Well Construction	Blows/6" OVM Readings	Litholgy Notes (texture, color, size)	
0	road box				0
	lockcap				
	native				
	bentonite				
	seal				
2.5					2.5
			1,1,2,4		
			13 ppm	coarse sand, fine gravel	
5					5
			8,14		
7.5			10 ppm	brown/grey, sandy, fine gravel	7.5
	coarse sorted sand		6,7,6,8 3 ppm	well sorted, fine grained brown sand	
10					10
12.5					12.5
	total depth = 13'				
15					15

STRATEGIC ANALYTICAL SYSTEMS, INC.

BORING LOG

PROJECT: Londonderry Auto
LOCATION: Londonderry, VT
DATE DRILLED: Dec. 13, 1993
WELL NUMBER: 8
Drilling Company: T+K Drig
Driller: Tomilla
Drilling Method: Hollow Auger
Logged By: Brackett
Hole Diameter: 6"
Screen Diameter: 2"
Casing Diameter: 2"
Slot Size: .020"
Total Depth: 13'
Screen Legth: 10'
Casing Length: 3'
Type: PVC

DEPTH (feet)	Well Materials	Well Construction	Blows/6" OVM Readings	Litholgy Notes (texture, color, size)	
0	road box				0
	lockcap				
	native				
	bentonite				
	seal				
2.5					2.5
			1,1,1,15		
			28 ppm	v. fine grained, silty	
5				clayey, dark brown sand	5
			25,14,10,10		
7.5			6 ppm	dark brown silty	7.5
				clay	
	coarse				
	sorted		10,13,10,9		
	sand		3 ppm	coarse grained, medium	
10				sorted brown sand	10
12.5					12.5
	total				
	depth				
	= 13'				
15					15

STRATEGIC ANALYTICAL SYSTEMS, INC.

BORING LOG

PROJECT:	Londonberry Auto	Hole Diameter:	6"
LOCATION:	Londonberry, VT	Screen Diameter:	2"
DATE DRILLED:	Dec. 13, 1993	Casing Diameter:	2"
WELL NUMBER:	9	Slot Size:	.020"
Drilling Company:	T+K Drig	Total Depth:	13'
Driller:	Tomilla	Screen Length:	10'
Drilling Method:	Hollow Auger	Casing Length:	3'
Logged By:	Brackett	Type:	PVC

DEPTH (feet)	Well Materials	Well Construction	Blows/6" OVM Readings	Litholgy Notes (texture, color, size)	
0	road box				0
	lockcap				
	native				
	bentonite				
	seal				
2.5					2.5
			2, 3, 7, 17		
			277 ppm	medium to coarse grained	
5				sand w/ quartz pebbles	5
			12, 12, 10, 9		
			16 ppm	fine brown, gravel	
7.5					7.5
	coarse				
	sorted				
	sand		5, 5, 7, 12		
10			6 ppm	fine gravel; coarse	10
				medium sorted, brown sand	
12.5					12.5
	total				
	depth				
	= 13'				
15					15

STRATEGIC ANALYTICAL SYSTEMS, INC.

BORING LOG

PROJECT:	Londonderry Auto	Hole Diameter:	6"
LOCATION:	Londonderry, VT	Screen Diameter:	2"
DATE DRILLED:	Dec. 13, 1993	Casing Diameter:	2"
WELL NUMBER:	10	Slot Size:	.020"
Drilling Company:	T+K Drig	Total Depth:	13'
Driller:	Tomilla	Screen Length:	10'
Drilling Method:	Hollow Auger	Casing Length:	3'
Logged By:	Brackett	Type:	PVC

DEPTH (feet)	Well Materials	Well Schematic	Blows/6" OVM Readings	Lithology Notes (texture, color, size)	
0	road box				0
	lockcap				
	native				
	bentonite				
	seal				
2.5					2.5
			2, 3, 7, 17		
			0 ppm	brown, organic	
5				topsoil	5
			12, 12, 10, 9		
			0 ppm	very silty, fine	
7.5				grained sand	7.5
	coarse				
	sorted				
	sand		5, 5, 7, 12		
10			1 ppm	silty, clayey, fine	10
				grained sand	
12.5					12.5
	total				
	depth				
	= 13'				
15					15

APPENDIX VIII



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr
Address: Box 2103
City: So. Londonderry, VT 05155
Sample ID: LAS-CM-004/LASCM004.1
Matrix: Ground Water (Well #1)
Sample Location: Londonderry Auto
Rte 11/Main St/Londonderry, VT

Report # 7600
Date Received: 12/20/93
Date Collected: 12/17/93
Test Date: 12/23/93
Dilution Factor: 1
Collected By: SLB

LAS-CM-004.1

PARAMETER	RESULT	MDL	UOM	METHOD #
CHLOROMETHANE	<10	<10	UG/L	EPA# 624
BROMOMETHANE	<10	<10	UG/L	EPA# 624
VINYL CHLORIDE	<10	<10	UG/L	EPA# 624
CHLOROETHANE	<10	<10	UG/L	EPA# 624
METHYLENE CHLORIDE	<2	<2	UG/L	EPA# 624
CARBON DISULFIDE	<2	<2	UG/L	EPA# 624
1,1-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
1,1-DICHLOROETHANE	<2	<2	UG/L	EPA# 624
TRANS-1,2-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
CIS-1,2-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
CHLOROFORM	<2	<2	UG/L	EPA# 624
1,2-DICHLOROETHANE	<2	<2	UG/L	EPA# 624
1,1,1-TRICHLOROETHANE	<2	<2	UG/L	EPA# 624
CARBON TETRACHLORIDE	<2	<2	UG/L	EPA# 624
BROMODICHLOROMETHANE	<2	<2	UG/L	EPA# 624
1,2-DICHLOROPROPANE	<2	<2	UG/L	EPA# 624
TRANS-1,3-DICHLOROPROPENE	<2	<2	UG/L	EPA# 624
TRICHLOROETHENE	<2	<2	UG/L	EPA# 624



Strategic Analytical Systems, Inc.

ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"



PARAMETER	RESULT	MDL	UOM	METHOD #
DIBROMOCHLOROMETHANE	<2	<2	UG/L	EPA# 624
1,1,2-TRICHLOROETHANE	<2	<2	UG/L	EPA# 624
CIS-1,3-DICHLOROPROPENE	<2	<2	UG/L	EPA# 624
2-CHLOROETHYLVINYLETHER	<2	<2	UG/L	EPA# 624
BROMOFORM	<2	<2	UG/L	EPA# 624
TETRACHLOROETHENE	<2	<2	UG/L	EPA# 624
1,1,2,2-TETRACHLOROETHANE	<2	<2	UG/L	EPA# 624
ACETONE	<50	<50	UG/L	EPA# 624
2-BUTANONE (MEK)	<10	<10	UG/L	EPA# 624
VINYL ACETATE	<10	<10	UG/L	EPA# 624
4-METHYL-2-PENTANONE (MIBK)	<10	<10	UG/L	EPA# 624
2-HEXANONE	<10	<10	UG/L	EPA# 624
BENZENE	38 *	<1	UG/L	EPA# 624
TOLUENE	<1	<1	UG/L	EPA# 624
ETHYLBENZENE	2	<10	UG/L	EPA# 624
TOTAL XYLENES	24	<10	UG/L	EPA# 624
CHLOROBENZENE	<1	<10	UG/L	EPA# 624
STYRENE	<1	<10	UG/L	EPA# 624

LASCM004.1

Analyst: LB

Approved by: J.T. MCCARTHY

-PLEASE NOTE-

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MDL = Minimum Detection Limit

MCL LIMIT = Proposed EPA Maximum Contaminant Level

LOD = Limit of Detection

ND = Level Present is below detection limit

NT = Not Tested

LAB ID#: 101293-B



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr
Address: Box 2103
City: So. Londonderry, VT 05155
Sample ID: LAS-CM-004/LASCM004.3
Matrix: Ground Water (Well #3)
Sample Location: Londonderry Auto
Rte 11/Main St/Londonderry, VT

Report # 7600
Date Received: 12/20/93
Date Collected: 12/17/93
Test Date: 12/23/93
Dilution Factor: 1
Collected By: SLB

LAS-CM-004.3

PARAMETER	RESULT	MDL	UOM	METHOD #
CHLOROMETHANE	<10	<10	UG/L	EPA# 624
BROMOMETHANE	<10	<10	UG/L	EPA# 624
VINYL CHLORIDE	<10	<10	UG/L	EPA# 624
CHLOROETHANE	<10	<10	UG/L	EPA# 624
METHYLENE CHLORIDE	<2	<2	UG/L	EPA# 624
CARBON DISULFIDE	<2	<2	UG/L	EPA# 624
1,1-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
1,1-DICHLOROETHANE	<2	<2	UG/L	EPA# 624
TRANS-1,2-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
CIS-1,2-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
CHLOROFORM	<2	<2	UG/L	EPA# 624
1,2-DICHLOROETHANE	<2	<2	UG/L	EPA# 624
1,1,1-TRICHLOROETHANE	<2	<2	UG/L	EPA# 624
CARBON TETRACHLORIDE	<2	<2	UG/L	EPA# 624
BROMODICHLOROMETHANE	<2	<2	UG/L	EPA# 624
1,2-DICHLOROPROPANE	<2	<2	UG/L	EPA# 624
TRANS-1,3-DICHLOROPROPENE	<2	<2	UG/L	EPA# 624
TRICHLOROETHENE	<2	<2	UG/L	EPA# 624



Strategic Analytical Systems, Inc.

ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"



PARAMETER	RESULT	MDL	UOM	METHOD #
DIBROMOCHLOROMETHANE	<2	<2	UG/L	EPA# 624
1,1,2-TRICHLOROETHANE	<2	<2	UG/L	EPA# 624
CIS-1,3-DICHLOROPROPENE	<2	<2	UG/L	EPA# 624
2-CHLOROETHYLVINYLETHER	<2	<2	UG/L	EPA# 624
BROMOFORM	<2	<2	UG/L	EPA# 624
TETRACHLOROETHENE	<2	<2	UG/L	EPA# 624
1,1,2,2-TETRACHLOROETHANE	<2	<2	UG/L	EPA# 624
ACETONE	<50	<50	UG/L	EPA# 624
2-BUTANONE (MEK)	<10	<10	UG/L	EPA# 624
VINYL ACETATE	<10	<10	UG/L	EPA# 624
4-METHYL-2-PENTANONE (MIBK)	<10	<10	UG/L	EPA# 624
2-HEXANONE	<10	<10	UG/L	EPA# 624
BENZENE	7*	<1	UG/L	EPA# 624
TOLUENE	31	<1	UG/L	EPA# 624
ETHYLBENZENE	<1	<10	UG/L	EPA# 624
TOTAL XYLENES	19	<10	UG/L	EPA# 624
CHLOROBENZENE	<1	<10	UG/L	EPA# 624
STYRENE	<1	<10	UG/L	EPA# 624

LASCM004.3

Analyst: LB

Approved by: J.T. MCCARTHY

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ND = Level Present is below detection limit

NT = Not Tested

LAB ID#: 101293-B



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr
Address: Box 2103
City: So. Londonderry, VT 05155
Sample ID: LAS-CM-004/LASCM004.5
Matrix: Ground Water (Well #5)
Sample Location: Londonderry Auto
Rte 11/Main St/Londonderry, VT

Report # 7600
Date Received: 12/23/93
Date Collected: 12/17/93
Test Date: 11/23/93
Dilution Factor: 10
Collected By: STB

LAS-CM-004.5

PARAMETER	RESULT	MDL	UOM	METHOD #
CHLOROMETHANE	<100	<100	UG/L	EPA# 624
BROMOMETHANE	<100	<100	UG/L	EPA# 624
VINYL CHLORIDE	<100	<100	UG/L	EPA# 624
CHLOROETHANE	<100	<100	UG/L	EPA# 624
METHYLENE CHLORIDE	<20	<20	UG/L	EPA# 624
CARBON DISULFIDE	<20	<20	UG/L	EPA# 624
1,1-DICHLOROETHENE	<20	<20	UG/L	EPA# 624
1,1-DICHLOROETHANE	<20	<20	UG/L	EPA# 624
TRANS-1,2-DICHLOROETHENE	<20	<20	UG/L	EPA# 624
CIS-1,2-DICHLOROETHENE	<20	<20	UG/L	EPA# 624
CHLOROFORM	<20	<20	UG/L	EPA# 624
1,2-DICHLOROETHANE	<20	<20	UG/L	EPA# 624
1,1,1-TRICHLOROETHANE	<20	<20	UG/L	EPA# 624
CARBON TETRACHLORIDE	<20	<20	UG/L	EPA# 624
BROMODICHLOROMETHANE	<20	<20	UG/L	EPA# 624
1,2-DICHLOROPROPANE	<20	<20	UG/L	EPA# 624
TRANS-1,3-DICHLOROPROPENE	<20	<20	UG/L	EPA# 624
TRICHLOROETHENE	<20	<20	UG/L	EPA# 624



Strategic Analytical Systems, Inc.

ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"



PARAMETER	RESULT	MDL	UOM	METHOD #
DIBROMOCHLOROMETHANE	<20	<20	UG/L	EPA# 624
1,1,2-TRICHLOROETHANE	<20	<20	UG/L	EPA# 624
CIS-1,3-DICHLOROPROPENE	<20	<20	UG/L	EPA# 624
2-CHLOROETHYLVINYLETHER	<20	<20	UG/L	EPA# 624
BROMOFORM	<20	<20	UG/L	EPA# 624
TETRACHLOROETHENE	<20	<20	UG/L	EPA# 624
1,1,2,2-TETRACHLOROETHANE	<20	<20	UG/L	EPA# 624
ACETONE	<500	<500	UG/L	EPA# 624
2-BUTANONE (MEK)	<100	<100	UG/L	EPA# 624
VINYL ACETATE	<100	<100	UG/L	EPA# 624
4-METHYL-2-PENTANONE (MIBK)	<100	<100	UG/L	EPA# 624
2-HEXANONE	<100	<100	UG/L	EPA# 624
BENZENE	460 *	<10	UG/L	EPA# 624
TOLUENE	500	<10	UG/L	EPA# 624
ETHYLBENZENE	110	<10	UG/L	EPA# 624
TOTAL XYLENES	390	<10	UG/L	EPA# 624
CHLOROBENZENE	<10	<10	UG/L	EPA# 624
STYRENE	<10	<10	UG/L	EPA# 624

LASCM004.5

Analyst: LB

Approved by: J.T. MCCARTHY

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MCL LIMIT = Proposed EPA Maximum Contaminant Level

LOD = Limit of Detection

ND = Level Present is below detection limit

NT = Not Tested

LAB ID#: 101293-B



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr
Address: Box 2103
City: So. Londonderry, VT 05155
Sample ID: LAS-CM-004/LASCM004.6
Matrix: Ground Water (Well #6)
Sample Location: Londonderry Auto
Rte 11/Main St/Londonderry, VT

Report # 7600
Date Received: 12/23/93
Date Collected: 12/17/93
Test Date: 11/23/93
Dilution Factor: 100
Collected By: STB

LAS-CM-004.6

PARAMETER	RESULT	MDL	UOM	METHOD #
CHLOROMETHANE	<1000	<1000	UG/L	EPA# 624
BROMOMETHANE	<1000	<1000	UG/L	EPA# 624
VINYL CHLORIDE	<1000	<1000	UG/L	EPA# 624
CHLOROETHANE	<1000	<1000	UG/L	EPA# 624
METHYLENE CHLORIDE	<200	<200	UG/L	EPA# 624
CARBON DISULFIDE	<200	<200	UG/L	EPA# 624
1,1-DICHLOROETHENE	<200	<200	UG/L	EPA# 624
1,1-DICHLOROETHANE	<200	<200	UG/L	EPA# 624
TRANS-1,2-DICHLOROETHENE	<200	<200	UG/L	EPA# 624
CIS-1,2-DICHLOROETHENE	<200	<200	UG/L	EPA# 624
CHLOROFORM	<200	<200	UG/L	EPA# 624
1,2-DICHLOROETHANE	<200	<200	UG/L	EPA# 624
1,1,1-TRICHLOROETHANE	<200	<200	UG/L	EPA# 624
CARBON TETRACHLORIDE	<200	<200	UG/L	EPA# 624
BROMODICHLOROMETHANE	<200	<200	UG/L	EPA# 624
1,2-DICHLOROPROPANE	<200	<200	UG/L	EPA# 624
TRANS-1,3-DICHLOROPROPENE	<200	<200	UG/L	EPA# 624
TRICHLOROETHENE	<200	<200	UG/L	EPA# 624



Strategic Analytical Systems, Inc.

ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"



PARAMETER	RESULT	MDL	UOM	METHOD #
DIBROMOCHLOROMETHANE	<200	<200	UG/L	EPA# 624
1,1,2-TRICHLOROETHANE	<200	<200	UG/L	EPA# 624
CIS-1,3-DICHLOROPROPENE	<200	<200	UG/L	EPA# 624
2-CHLOROETHYLVINYLETHER	<200	<200	UG/L	EPA# 624
BROMOFORM	<200	<200	UG/L	EPA# 624
TETRACHLOROETHENE	<200	<200	UG/L	EPA# 624
1,1,2,2-TETRACHLOROETHANE	<200	<200	UG/L	EPA# 624
ACETONE	<5000	<5000	UG/L	EPA# 624
2-BUTANONE (MEK)	<1000	<1000	UG/L	EPA# 624
VINYL ACETATE	<1000	<1000	UG/L	EPA# 624
4-METHYL-2-PENTANONE (MIBK)	<1000	<1000	UG/L	EPA# 624
2-HEXANONE	<1000	<1000	UG/L	EPA# 624
BENZENE	4,100 *	<100	UG/L	EPA# 624
TOLUENE	18,000 *	<100	UG/L	EPA# 624
ETHYLBENZENE	2,800 *	<100	UG/L	EPA# 624
TOTAL XYLENES	11,000 *	<100	UG/L	EPA# 624
CHLOROBENZENE	<100	<100	UG/L	EPA# 624
STYRENE	<100	<100	UG/L	EPA# 624

LASCM004.6

Analyst: LB

Approved by: J.T. MCCARTHY

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NT = Not Tested

LAB ID#: 101293-B



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr
Address: Box 2103
City: So. Londonderry, VT 05155
Sample ID: LAS-CM-004/LASCM004.7
Matrix: Ground Water (Well #7)
Sample Location: Londonderry Auto
Rte 11/Main St/Londonderry, VT

Report # 7600
Date Received: 12/23/93
Date Collected: 12/17/93
Test Date: 11/23/93
Dilution Factor: 10
Collected By: STB

LAS-CM-004.7

PARAMETER	RESULT	MDL	UOM	METHOD #
CHLOROMETHANE	<100	<100	UG/L	EPA# 624
BROMOMETHANE	<100	<100	UG/L	EPA# 624
VINYL CHLORIDE	<100	<100	UG/L	EPA# 624
CHLOROETHANE	<100	<100	UG/L	EPA# 624
METHYLENE CHLORIDE	<20	<20	UG/L	EPA# 624
CARBON DISULFIDE	<20	<20	UG/L	EPA# 624
1,1-DICHLOROETHENE	<20	<20	UG/L	EPA# 624
1,1-DICHLOROETHANE	<20	<20	UG/L	EPA# 624
TRANS-1,2-DICHLOROETHENE	<20	<20	UG/L	EPA# 624
CIS-1,2-DICHLOROETHENE	<20	<20	UG/L	EPA# 624
CHLOROFORM	<20	<20	UG/L	EPA# 624
1,2-DICHLOROETHANE	<20	<20	UG/L	EPA# 624
1,1,1-TRICHLOROETHANE	<20	<20	UG/L	EPA# 624
CARBON TETRACHLORIDE	<20	<20	UG/L	EPA# 624
BROMODICHLOROMETHANE	<20	<20	UG/L	EPA# 624
1,2-DICHLOROPROPANE	<20	<20	UG/L	EPA# 624
TRANS-1,3-DICHLOROPROPENE	<20	<20	UG/L	EPA# 624
TRICHLOROETHENE	<20	<20	UG/L	EPA# 624



Strategic Analytical Systems, Inc.

ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"



PARAMETER	RESULT	MDL	UOM	METHOD #
DIBROMOCHLOROMETHANE	<20	<20	UG/L	EPA# 624
1,1,2-TRICHLOROETHANE	<20	<20	UG/L	EPA# 624
CIS-1,3-DICHLOROPROPENE	<20	<20	UG/L	EPA# 624
2-CHLOROETHYLVINYLETHER	<20	<20	UG/L	EPA# 624
BROMOFORM	<20	<20	UG/L	EPA# 624
TETRACHLOROETHENE	<20	<20	UG/L	EPA# 624
1,1,2,2-TETRACHLOROETHANE	<20	<20	UG/L	EPA# 624
ACETONE	<500	<500	UG/L	EPA# 624
2-BUTANONE (MEK)	<100	<100	UG/L	EPA# 624
VINYL ACETATE	<100	<100	UG/L	EPA# 624
4-METHYL-2-PENTANONE (MIBK)	<100	<100	UG/L	EPA# 624
2-HEXANONE	<100	<100	UG/L	EPA# 624
BENZENE	80 *	<10	UG/L	EPA# 624
TOLUENE	300	<10	UG/L	EPA# 624
ETHYLBENZENE	250	<10	UG/L	EPA# 624
TOTAL XYLENES	1,600	<10	UG/L	EPA# 624
CHLOROBENZENE	<10	<10	UG/L	EPA# 624
STYRENE	<10	<10	UG/L	EPA# 624

LASCM004.7

Analyst: LB

Approved by: J.T. MCCARTHY

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NT = Not Tested

LAB ID#: 101293-B



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr
Address: Box 2103
City: So. Londonderry, VT 05155
Sample ID: LAS-CM-004/LASCM004.8
Matrix: Ground Water (Well #8)
Sample Location: Londonderry Auto
Rte 11/Main St/Londonderry, VT

Report # 7600
Date Received: 12/20/93
Date Collected: 12/17/93
Test Date: 12/23/93
Dilution Factor: 1
Collected By: SLB

LAS-CM-004.8

PARAMETER	RESULT	MDL	UOM	METHOD #
CHLOROMETHANE	<10	<10	UG/L	EPA# 624
BROMOMETHANE	<10	<10	UG/L	EPA# 624
VINYL CHLORIDE	<10	<10	UG/L	EPA# 624
CHLOROETHANE	<10	<10	UG/L	EPA# 624
METHYLENE CHLORIDE	<2	<2	UG/L	EPA# 624
CARBON DISULFIDE	<2	<2	UG/L	EPA# 624
1,1-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
1,1-DICHLOROETHANE	<2	<2	UG/L	EPA# 624
TRANS-1,2-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
CIS-1,2-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
CHLOROFORM	<2	<2	UG/L	EPA# 624
1,2-DICHLOROETHANE	<2	<2	UG/L	EPA# 624
1,1,1-TRICHLOROETHANE	<2	<2	UG/L	EPA# 624
CARBON TETRACHLORIDE	<2	<2	UG/L	EPA# 624
BROMODICHLOROMETHANE	<2	<2	UG/L	EPA# 624
1,2-DICHLOROPROPANE	<2	<2	UG/L	EPA# 624
TRANS-1,3-DICHLOROPROPENE	<2	<2	UG/L	EPA# 624
TRICHLOROETHENE	<2	<2	UG/L	EPA# 624



Strategic Analytical Systems, Inc.

ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"



PARAMETER	RESULT	MDL	UOM	METHOD #
DIBROMOCHLOROMETHANE	<2	<2	UG/L	EPA# 624
1,1,2-TRICHLOROETHANE	<2	<2	UG/L	EPA# 624
CIS-1,3-DICHLOROPROPENE	<2	<2	UG/L	EPA# 624
2-CHLOROETHYLVINYLEETHER	<2	<2	UG/L	EPA# 624
BROMOFORM	<2	<2	UG/L	EPA# 624
TETRACHLOROETHENE	<2	<2	UG/L	EPA# 624
1,1,2,2-TETRACHLOROETHANE	<2	<2	UG/L	EPA# 624
ACETONE	<50	<50	UG/L	EPA# 624
2-BUTANONE (MEK)	<10	<10	UG/L	EPA# 624
VINYL ACETATE	<10	<10	UG/L	EPA# 624
4-METHYL-2-PENTANONE (MIBK)	<10	<10	UG/L	EPA# 624
2-HEXANONE	<10	<10	UG/L	EPA# 624
BENZENE	8 *	<1	UG/L	EPA# 624
TOLUENE	2	<1	UG/L	EPA# 624
ETHYLBENZENE	<1	<10	UG/L	EPA# 624
TOTAL XYLENES	2	<10	UG/L	EPA# 624
CHLOROBENZENE	<1	<10	UG/L	EPA# 624
STYRENE	<1	<10	UG/L	EPA# 624

LASCM004.8

Analyst: LB

Approved by: J.T. MCCARTHY

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LOD = Limit of Detection

ND = Level Present is below detection limit

NT = Not Tested

LAB ID#: 101293-B



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr
Address: Box 2103
City: So. Londonderry, VT 05155
Sample ID: LAS-CM-004/LASCM004.9
Matrix: Ground Water (Well #9)
Sample Location: Londonderry Auto
Rte 11/Main St/Londonderry, VT

Report # 7600
Date Received: 12/20/93
Date Collected: 12/17/93
Test Date: 12/23/93
Dilution Factor: 1
Collected By: SLB

LAS-CM-004.9

PARAMETER	RESULT	MDL	UOM	METHOD #
CHLOROMETHANE	<10	<10	UG/L	EPA# 624
BROMOMETHANE	<10	<10	UG/L	EPA# 624
VINYL CHLORIDE	<10	<10	UG/L	EPA# 624
CHLOROETHANE	<10	<10	UG/L	EPA# 624
METHYLENE CHLORIDE	<2	<2	UG/L	EPA# 624
CARBON DISULFIDE	<2	<2	UG/L	EPA# 624
1,1-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
1,1-DICHLOROETHANE	<2	<2	UG/L	EPA# 624
TRANS-1,2-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
CIS-1,2-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
CHLOROFORM	<2	<2	UG/L	EPA# 624
1,2-DICHLOROETHANE	<2	<2	UG/L	EPA# 624
1,1,1-TRICHLOROETHANE	<2	<2	UG/L	EPA# 624
CARBON TETRACHLORIDE	<2	<2	UG/L	EPA# 624
BROMODICHLOROMETHANE	<2	<2	UG/L	EPA# 624
1,2-DICHLOROPROPANE	<2	<2	UG/L	EPA# 624
TRANS-1,3-DICHLOROPROPENE	<2	<2	UG/L	EPA# 624
TRICHLOROETHENE	<2	<2	UG/L	EPA# 624



Strategic Analytical Systems, Inc.

ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"



PARAMETER	RESULT	MDL	UOM	METHOD #
DIBROMOCHLOROMETHANE	<2	<2	UG/L	EPA# 624
1,1,2-TRICHLOROETHANE	<2	<2	UG/L	EPA# 624
CIS-1,3-DICHLOROPROPENE	<2	<2	UG/L	EPA# 624
2-CHLOROETHYLVINYLEETHER	<2	<2	UG/L	EPA# 624
BROMOFORM	<2	<2	UG/L	EPA# 624
TETRACHLOROETHENE	<2	<2	UG/L	EPA# 624
1,1,2,2-TETRACHLOROETHANE	<2	<2	UG/L	EPA# 624
ACETONE	<50	<50	UG/L	EPA# 624
2-BUTANONE (MEK)	<10	<10	UG/L	EPA# 624
VINYL ACETATE	<10	<10	UG/L	EPA# 624
4-METHYL-2-PENTANONE (MIBK)	<10	<10	UG/L	EPA# 624
2-HEXANONE	<10	<10	UG/L	EPA# 624
BENZENE	4	<1	UG/L	EPA# 624
TOLUENE	21	<1	UG/L	EPA# 624
ETHYLBENZENE	26	<10	UG/L	EPA# 624
TOTAL XYLENES	94	<10	UG/L	EPA# 624
CHLOROBENZENE	<1	<10	UG/L	EPA# 624
STYRENE	<1	<10	UG/L	EPA# 624

LASCM004.9

Analyst: LB

Approved by: J.T. MCCARTHY

-PLEASE NOTE-

The results here can not be reproduced in whole or in part without our prior consent. The results apply only to the actual sample tested. Strategic Analytical shall be held harmless from any liability arising out of the use of such results. The integrity of the sample and results is dependent on the quality of sampling.

* = Exceeds EPA Proposed MCL Limits
MDL = Minimum Detection Limit
MCL LIMIT = Proposed EPA Maximum Contaminant Level
LOD = Limit of Detection
ND = Level Present is below detection limit
NT = Not Tested

LAB ID#: 101293-B



Strategic Analytical Systems, Inc.



ENVIRONMENTAL CONSULTING AND ANALYSIS

"From Field to Laboratory"

LABORATORY ANALYSIS REPORT

Company Name: Sandy West/Harlan West Jr
Address: Box 2103
City: So. Londonderry, VT 05155
Sample ID: LAS-CM-004/LASCM004.10
Matrix: Ground Water (Well #10)
Sample Location: Henry Abbott Residence
Rte 11/Main St/Londonderry, VT

Report # 7600
Date Received: 12/20/93
Date Collected: 12/17/93
Test Date: 12/23/93
Dilution Factor: 1
Collected By: SLB

LAS-CM-004.10

PARAMETER	RESULT	MDL	UOM	METHOD #
CHLOROMETHANE	<10	<10	UG/L	EPA# 624
BROMOMETHANE	<10	<10	UG/L	EPA# 624
VINYL CHLORIDE	<10	<10	UG/L	EPA# 624
CHLOROETHANE	<10	<10	UG/L	EPA# 624
METHYLENE CHLORIDE	<2	<2	UG/L	EPA# 624
CARBON DISULFIDE	<2	<2	UG/L	EPA# 624
1,1-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
1,1-DICHLOROETHANE	<2	<2	UG/L	EPA# 624
TRANS-1,2-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
CIS-1,2-DICHLOROETHENE	<2	<2	UG/L	EPA# 624
CHLOROFORM	<2	<2	UG/L	EPA# 624
1,2-DICHLOROETHANE	<2	<2	UG/L	EPA# 624
1,1,1-TRICHLOROETHANE	<2	<2	UG/L	EPA# 624
CARBON TETRACHLORIDE	<2	<2	UG/L	EPA# 624
BROMODICHLOROMETHANE	<2	<2	UG/L	EPA# 624
1,2-DICHLOROPROPANE	<2	<2	UG/L	EPA# 624
TRANS-1,3-DICHLOROPROPENE	<2	<2	UG/L	EPA# 624
TRICHLOROETHENE	<2	<2	UG/L	EPA# 624



Strategic Analytical Systems, Inc.

ENVIRONMENTAL CONSULTING AND ANALYSIS
"From Field to Laboratory"



PARAMETER	RESULT	MDL	UOM	METHOD #
DIBROMOCHLOROMETHANE	<2	<2	UG/L	EPA# 624
1,1,2-TRICHLOROETHANE	<2	<2	UG/L	EPA# 624
CIS-1,3-DICHLOROPROPENE	<2	<2	UG/L	EPA# 624
2-CHLOROETHYLVINYLETHER	<2	<2	UG/L	EPA# 624
BROMOFORM	<2	<2	UG/L	EPA# 624
TETRACHLOROETHENE	<2	<2	UG/L	EPA# 624
1,1,2,2-TETRACHLOROETHANE	<2	<2	UG/L	EPA# 624
ACETONE	<50	<50	UG/L	EPA# 624
2-BUTANONE (MEK)	<10	<10	UG/L	EPA# 624
VINYL ACETATE	<10	<10	UG/L	EPA# 624
4-METHYL-2-PENTANONE (MIBK)	<10	<10	UG/L	EPA# 624
2-HEXANONE	<10	<10	UG/L	EPA# 624
BENZENE	<1	<1	UG/L	EPA# 624
TOLUENE	<1	<1	UG/L	EPA# 624
ETHYLBENZENE	<1	<10	UG/L	EPA# 624
TOTAL XYLENES	<1	<10	UG/L	EPA# 624
CHLOROBENZENE	<1	<10	UG/L	EPA# 624
STYRENE	<1	<10	UG/L	EPA# 624

LASCM004.10

Analyst: LB

Approved by: J.T. MCCARTHY

-PLEASE NOTE-

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MDL = Minimum Detection Limit

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NT = Not Tested

LAB ID#: 101293-B

APPENDIX IX

APPENDIX X

APPENDIX XI

LONDONDERRY AUTO CROSS SECTION B-B'

SOUTH TO NORTH

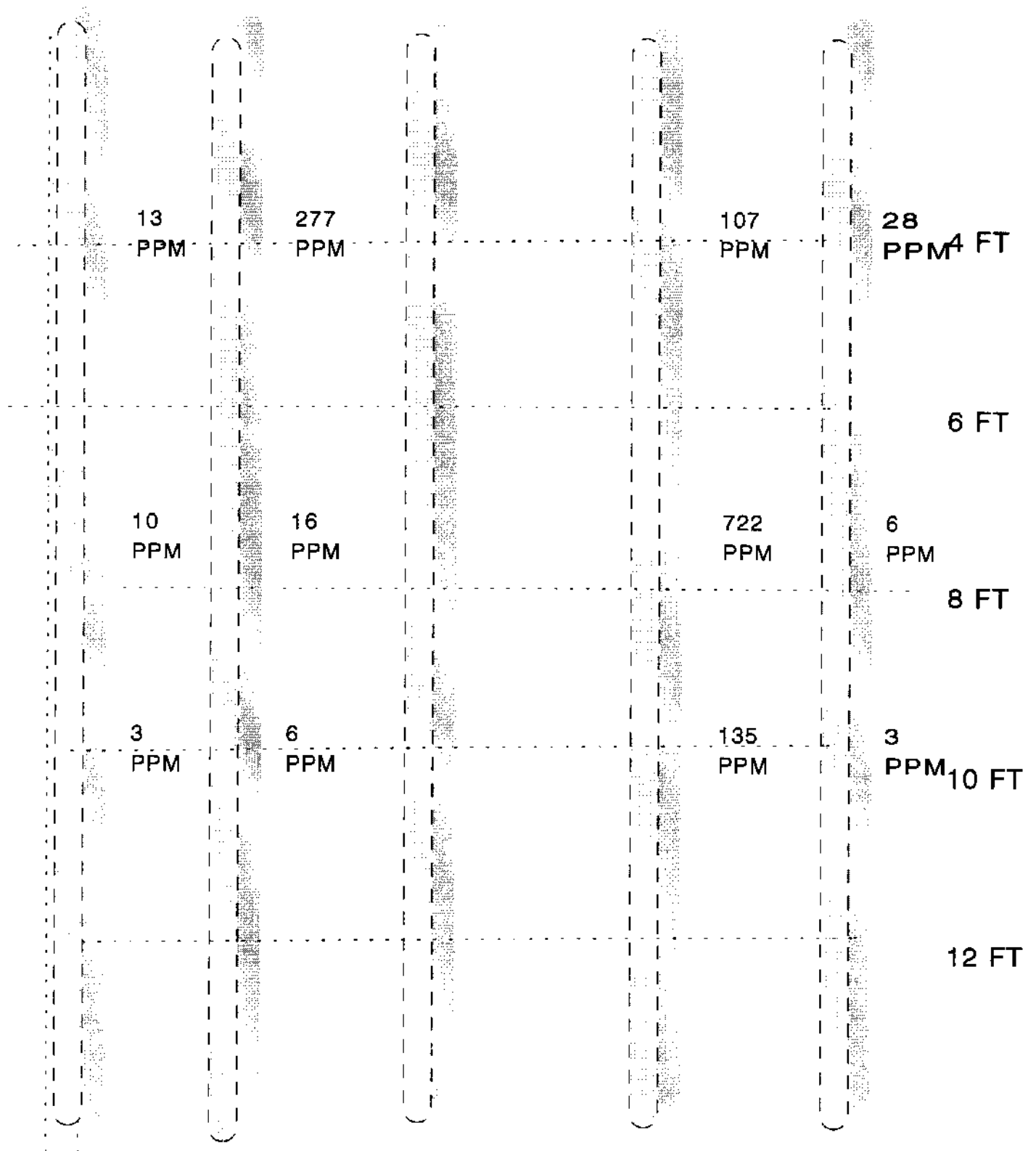
MW 7

MW 9

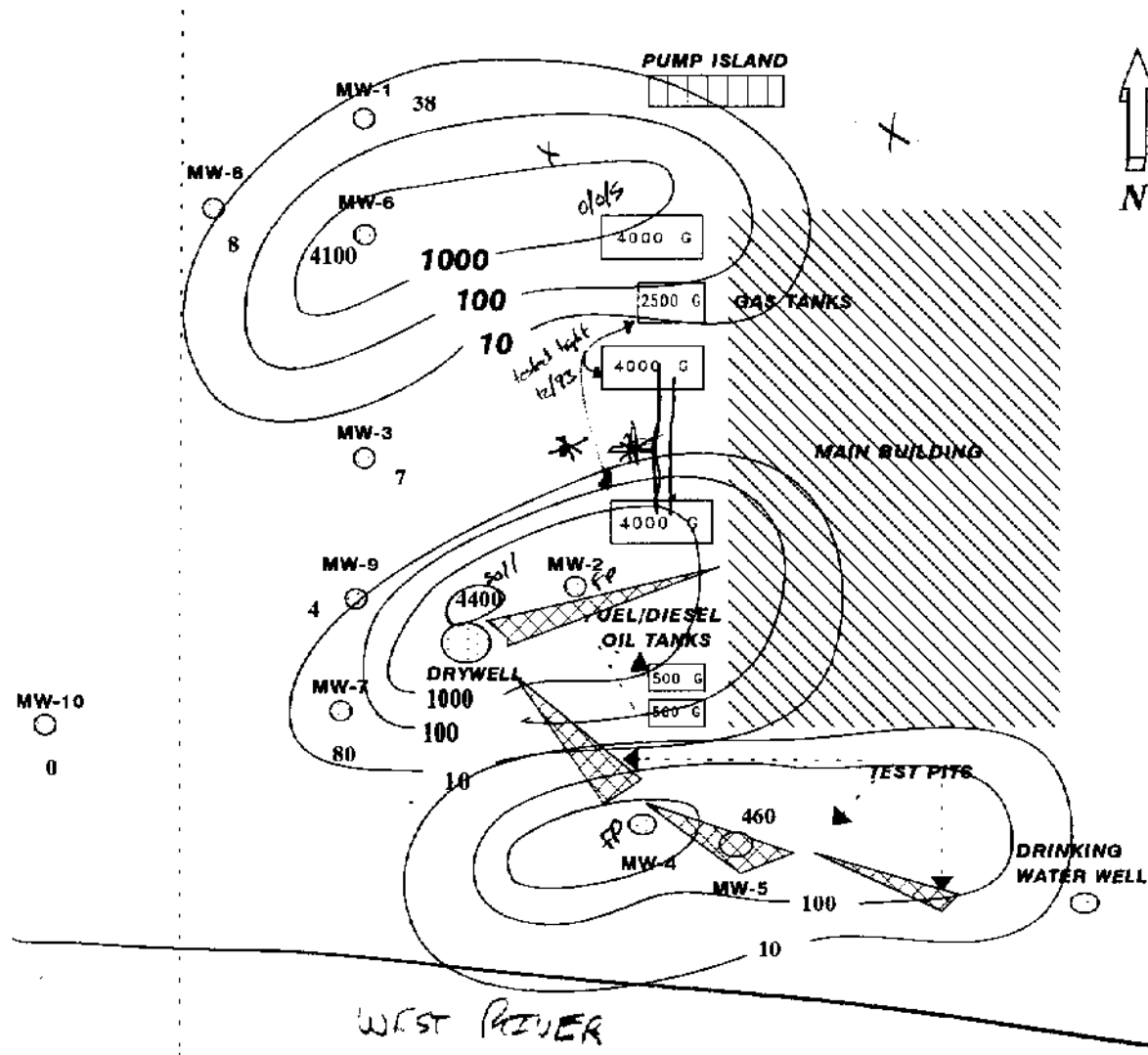
MW 3

MW 6

MW 8

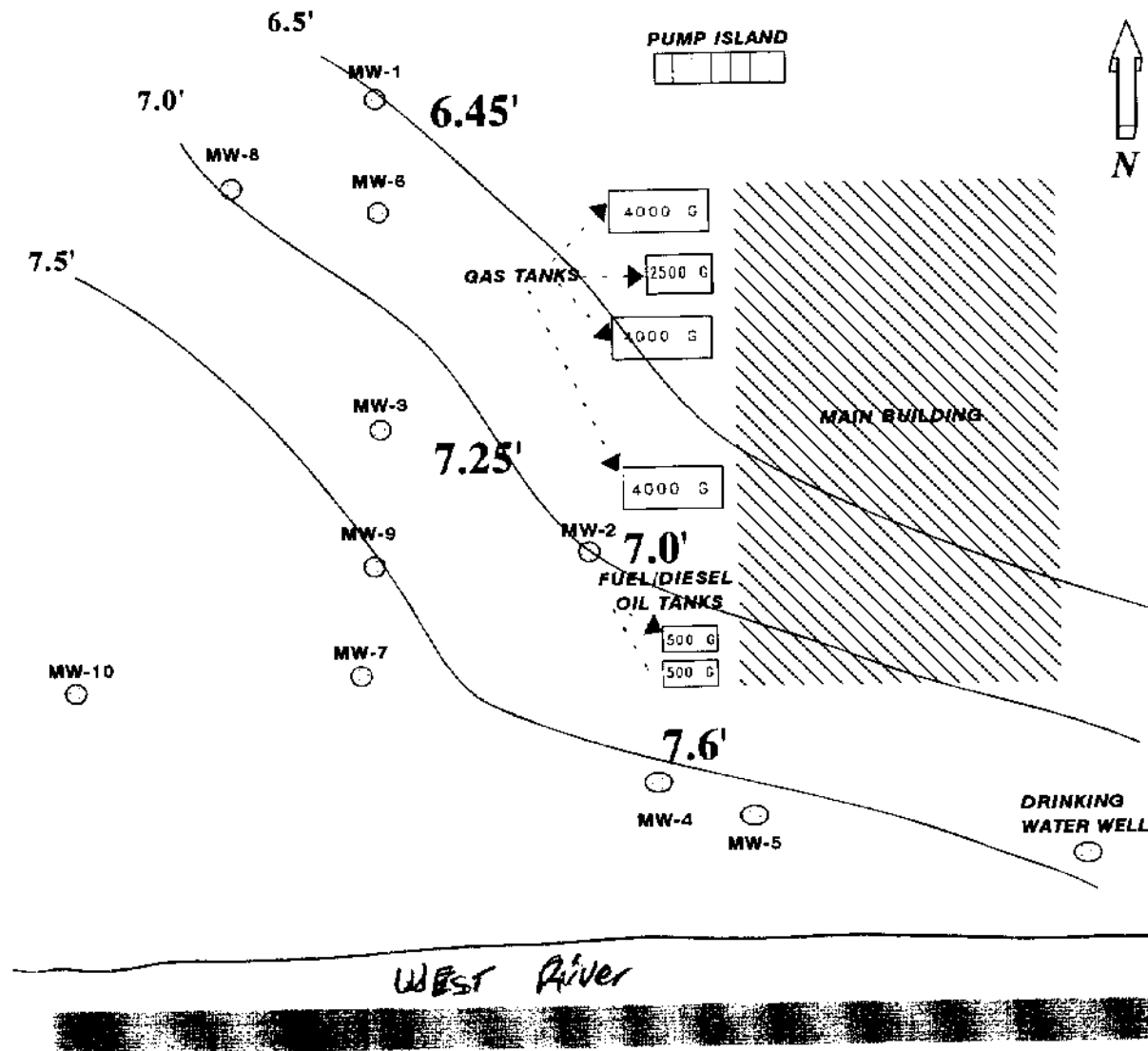


LONDONDERRY AUTO SERVICE, INC. ROUTE 11 LONDONDERRY, VERMONT



STRATEGIC ANALYTICAL SYSTEMS, INC. P.O. BOX 1146 KEENE, NEW HAMPSHIRE	
BENZENE ISOPLETH MAP	
DRAWN BY JTMc	DATE: 01/15/94
REVISION: 0	DRAWING #: LAS-CM-001

LONDONDERRY AUTO SERVICE, INC. ROUTE 11 LONDONDERRY, VERMONT



STRATEGIC ANALYTICAL SYSTEMS, INC. P.O. BOX 1146 KEENE, NEW HAMPSHIRE	
GROUNDWATER CONTOUR MAP	
DRAWN BY: JTMc	DATE: 01/15/94
REVISION: 0	DRAWING # LAS-CM-001